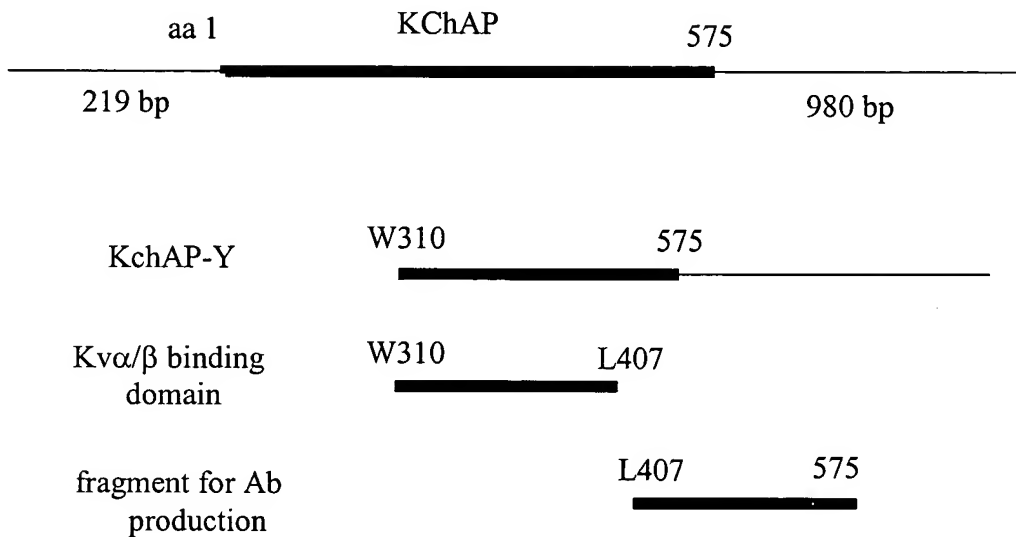


APPROVED	O.G. FIG.	Title: PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME
BY	CLASS	
DRAFTSMAN	SUBCLASS	Inventors Name: Brown, et al. Attorney Docket Number: 222884/04066

Fig. 1



205720-405400

APPROVED	O.G. F.G.	
BY	CLASS	SUBCLASS
DRAFTSMAN	Title	

PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME

Inventors Name: Brown, et al.

Attorney Docket Number: 222884/04066

Fig. 2A

```

atgaagatcaaagaactttaccgcagggcgctttccccggaagaccctggggccttccgat
1  -----+-----+-----+-----+-----+-----+-----+ 60
M K I K E L Y R R R F P R K T L G R S D -

ctctcttttgctctctttgccccctggcacctctcctgtaggctccccagcccccttgct
61 -----+-----+-----+-----+-----+-----+-----+ 120
L S L L S L P P G T S P V G S P S P L A -

                                     A
                                     p
                                     a
                                     I
tccattcctcccaccctcctgaccctggcaccttgctgggcccctaagcgtgaggtggac
121 -----+-----+-----+-----+-----+-----+-----+ 180
S I P P T L L T P G T L L G P K R E V D -

                                     A
                                     a
                                     t
                                     I
                                     I
atgcaccctcctctgccccagcctgtgcaccctgacgtcaccatgaaaccactgccttc
181 -----+-----+-----+-----+-----+-----+-----+ 240
M H P P L P Q P V H P D V T M K P L P F -

                                     E
                                     a
                                     g
                                     I
tacgaagtctacggagagctcatccggccgaccacccttgcgctccacctccagtcagagg
241 -----+-----+-----+-----+-----+-----+-----+ 300
Y E V Y G E L I R P T T L A S T S S Q R -

                                     P
                                     v      p
                                     u      s
                                     I      t
                                     I      I
tttgaggaagcccactttacctttgcaactcactccccagcagctgcagcagattctcaca
301 -----+-----+-----+-----+-----+-----+-----+ 360
F E E H H F T F A L T P Q Q L Q Q I L T -

```

2025074-021302

APPROVED	Q.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Title: PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME

Inventors Name: Brown, et al.

Attorney Docket Number: 222884/04066

Fig. 2B

```

tccagggaggttctgccaggagccaagtgcgattataccatacaagtgcagctcaggttc
361 -----+-----+-----+-----+-----+-----+-----+ 420
S R E V L P G A K C D Y T I Q V Q L R F -

P
v
u
I
I

tgtctctgtgagaccagctgccccaggaggactatttccccctaacctctttgtcaag
421 -----+-----+-----+-----+-----+-----+-----+ 480
C L C E T S C P Q E D Y F P P N L F V K -

B
s
t
E
I
I

gttaatgggaaactctgccccctgccgggttacctccctccaaccaagaatggagctgag
481 -----+-----+-----+-----+-----+-----+-----+ 540
V N G K L C P L P G Y L P P T K N G A E -

S
t
u
I

cccaagaggcctagtcgtccaatcaacatcacaccctggctcgtctctcagccactggtt
541 -----+-----+-----+-----+-----+-----+-----+ 600
P K R P S R P I N I T P L A R L S A T V -

H
P
a
I

cccaacaccatagtggttaactggatctctgagtttgacggaattactccttgctctgtg
601 -----+-----+-----+-----+-----+-----+-----+ 660
P N T I V V N W S S E F G R N Y S L S V -

```

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APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Title: PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME

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Attorney Docket Number: 222884/04066

Fig. 2C

P  
S  
t  
I

B  
S  
a  
W  
I

661    tacctggtgaggcagttgactgcagggacccctgctacaaaagctcagagccaagggtatc    720  
-----+-----+-----+-----+-----+-----+-----+  
Y L V R Q L T A G T L L Q K L R A K G I    -

A  
v  
a  
I

721    cggaatccagaccattcccgagcactgatcaaggagaaattgactgctgaccccgacagt    780  
-----+-----+-----+-----+-----+-----+-----+  
R N P D H S R A L I K E K L T A D P D S    -

781    gaagtggctactacaagtctccgggtgtcactcatgtgcccgctggggaagatgcgcctg    840  
-----+-----+-----+-----+-----+-----+-----+  
E V A T T S L R V S L M C P L G K M R L    -

P  
S  
t  
I

841    actgtcccatgccgcgctctcacctgtgccacctgcagagtttcgatgctgcccctttat    900  
-----+-----+-----+-----+-----+-----+-----+  
T V P C R A L T C A H L Q S F D A A L Y    -

901    ctacagatgaatgagaaaaagccaacatggacgtgccctgtgtgtgacaagaaggctccc    960  
-----+-----+-----+-----+-----+-----+-----+  
L Q M N E K K P T W T C P V C D K K A P    -

961    tatgagtcactgattattgatgggtttattcatggaaattcttaattcctgttcggattgt    1020  
-----+-----+-----+-----+-----+-----+-----+  
Y E S L I I D G L F M E I L N S C S D C    -

P                      B  
f                      a  
l                      m  
M                      H  
I                      I

1021    gatgagatccagttcatggaagatggatcctggtgtccaatgaaacccaagaaggaggca    1080  
-----+-----+-----+-----+-----+-----+-----+  
D E I Q F M E D G S W C P M K P K K E A    -

20075074-021300

APPROVED	O.G. FIG.
BY	CLASS
DRAFTSMAN	SUBCLASS

Title: PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME

Inventors Name: Brown, et al.  
Attorney Docket Number: 222884/04066

Fig. 2D

P  
f  
l  
M  
I

tccgagggtttgccccccaccagggtatgggctggatggctccagtatagcccagtcag  
1081-----+-----+-----+-----+-----+-----+ 1140  
S E V C P P P G Y G L D G L Q Y S P V Q -

gagggaaatcagtcagagaataagaagagggttgaagtcattgacttgacaatcgaaagc  
1141-----+-----+-----+-----+-----+-----+ 1200  
E G N Q S E N K K R V E V I D L T I E S -

B  
g  
l  
I  
I

tcatcagatgaggaagatctgccccccaccaagaagcactgccctgttacctcggctgcc  
1201-----+-----+-----+-----+-----+-----+ 1260  
S S D E E D L P P T K K H C P V T S A A -

B  
S  
t  
E  
I  
I

attccagcccttcctggaagcaaaggagccctgacctctggtcaccagccgtcttcggtg  
1261-----+-----+-----+-----+-----+-----+ 1320  
I P A L P G S K G A L T S G H Q P S S V -

ctgcggagccctgcaatgggtacactgggcagtgatttcctgtctagtctcccactacat  
1321-----+-----+-----+-----+-----+-----+ 1380  
L R S P A M G T L G S D F L S S L P L H -

gagtaccacactgccttcccgcctgggggctgacatccaaggtttagatttattttctttc  
1381-----+-----+-----+-----+-----+-----+ 1440  
E Y P P A F P L G A D I Q G L D L F S F -

cttcagactgagagtcagcactacagcccttcagttatcacttcactagatgagcaggac  
1441-----+-----+-----+-----+-----+-----+ 1500  
L Q T E S Q H Y S P S V I T S L D E Q D -

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APPROVED	O.C. #
BY	CLASS/SUBCLASS
DRAFTSMAN	Title: PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME

Title: PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME

Inventors Name: Brown, et al.  
Attorney Docket Number: 222884/04066

Fig. 2E

P  
f A  
l p  
M a  
I I

acccttggccacttcttccaattccggggaacccctccccacttcctgggccaactggcc  
1501-----+-----+-----+-----+-----+-----+ 1560  
T L G H F F Q F R G T P P H F L G P L A -

cccacattggggagctctcaccgcagcgccactccagcaccgcgtcctggccgtgtcagc  
1561-----+-----+-----+-----+-----+-----+ 1620  
P T L G S S J R S A T P A P A P G R V S -

B  
s  
a  
W  
I

agcattgtggctcctgggagttccttgagggaagggcatggaggacccctgccttccggt  
1621-----+-----+-----+-----+-----+-----+ 1680  
S I V A P G S S L R E G H G G P L P S G -

A  
a  
t  
I  
I

ccctctttgactggctgtcggtcagacgtcatttccttggactga  
1681-----+-----+-----+-----+-----+ 1725  
P S L T G C R S D V I S L D \* -

Enzymes that do cut:

AatII	Apal	AvaI	BamHI	BglII	BsaWI	BstEII	EagI
HpaI	PflMI	PstI	PvuII	StuI			

Enzymes that do not cut:

AgeI	AseI	BbrPI	BfrI	BsaBI	BsmI	BssHII	BstbI
BstXI	ClaI	DraI	DraIII	EcoRI	HindIII	KpnI	MluI
NarI	NcoI	NdeI	NheI	NotI	NruI	NsiI	PmlI
PvuI	SacII	SalI	SauI	Scal	SfiI	SmaI	SnaBI
SpeI	SspI	XbaI	XhoI				

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APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Title: PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME

Inventors Name: Brown, et al.  
Attorney Docket Number: 222884/04066

Fig. 3A

2007-05-04 10:05:04

A  
p  
a  
I

atgaagatcaaagagctttaccgacgacgctttccccggaagaccctggggccctctgat  
1 -----+-----+-----+-----+-----+-----+-----+ 60  
M K I K E L Y R R R F P R K T L G P S D -

ctctcccttctctctttgccccctggcacctctcctgtaggctcccctggctcctctagct  
61 -----+-----+-----+-----+-----+-----+-----+ 120  
L S L L S L P P G T S P V G S P G P L A -

A  
p  
a  
I

cccatcccccaacgctgttgccccctggcacccctgctgggcccccaagcgtgaggtggac  
121 -----+-----+-----+-----+-----+-----+-----+ 180  
P I P P T L L A P G T L L G P K R E V D -

atgcacccccctctgccccagcctgtgcaccctgatgtcaccatgaaaccattgccccttc  
181 -----+-----+-----+-----+-----+-----+-----+ 240  
M H P P L P Q P V H P D V T M K P L P F -

tatgaagtctatggggagctcatccggcccaccacccttgcattccacttctagccagcgg  
241 -----+-----+-----+-----+-----+-----+-----+ 300  
Y E V Y G E L I R P T T L A S T S S Q R -

tttgaggaagcgcactttacctttgccctcacaccccagcaagtgcagcagattcttaca  
301 -----+-----+-----+-----+-----+-----+-----+ 360  
F E E A H F T F A L T P Q Q V Q Q I L T -

tccagagaggttctgccaggagccaaatgtgattataccatacaggtgcagctaagggttc  
361 -----+-----+-----+-----+-----+-----+-----+ 420  
S R E V L P G A K C D Y T I Q V Q L R F -

P  
v  
u  
I  
I

tgtctctgtgagaccagctgccccaggaagattatttcccccaacctctttgtcaag  
421 -----+-----+-----+-----+-----+-----+-----+ 480  
C L C E T S C P Q E D Y F P P N L F V K -

APPROVED	O.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN	Title:	

PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME

Inventors Name: Brown, et al.

Attorney Docket Number: 222884/04066

Fig. 3B

B  
s  
t  
E  
I  
I

gttaatgggaaactgtgccccctgccgggttaccttccccaaccaagaatggggccgag  
481 -----+-----+-----+-----+-----+-----+-----+ 540  
V N G K L C P L P G Y L P P T K N G A E -

ccaagaggccagccgcccccatcaacatcacacccctggctcgactctcagccactgtt  
541 -----+-----+-----+-----+-----+-----+-----+ 600  
P K R P S R P I N I T P L A R L S A T V -

ccaacaccattgtggtcaattggtcatctgagttcggacggaattactccttgtctgtg  
601 -----+-----+-----+-----+-----+-----+-----+ 660  
P N T I V V N W S S E F G R N Y S L S V -

P  
s  
t  
I

B  
s  
a  
W  
I

tacctggtgaggcagttgactgcaggaacccttctacaaaaactcagagcaaagggtatc  
661 -----+-----+-----+-----+-----+-----+-----+ 720  
Y L V R Q L T A G T L L Q K L R A K G I -

cggaaccagaccactcgcgggcactgatcaaggagaaattgactgctgaccctgacagt  
721 -----+-----+-----+-----+-----+-----+-----+ 780  
R N P D H S R A L I K E K L T A D P D S -

gaggtggccactacaagtctccgggtgtcactcatgtgcccgctaggaagatgcgcctg  
781 -----+-----+-----+-----+-----+-----+-----+ 840  
E V A T T S L R V S L M C P L G K M R L -

P  
s  
t  
I

actgtcccttgtcgtgcccctcacctgtgcccacctgcagagcttcgatgctgccctttat  
841 -----+-----+-----+-----+-----+-----+-----+ 900  
T V P C R A L T C A H L Q S F D A A L Y -

ctacagatgaatgagaagaagcctacatggacatgtcctgtgtgtgacaagaaggctccc  
901 -----+-----+-----+-----+-----+-----+-----+ 960  
L Q M N E K K P T W T C P V C D K K A P -

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APPROVED	O.G. FIG.
BY	CLASS
DRAFTSMAN	SUBCLASS

PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME

Inventors Name: Brown, et al.  
Attorney Docket Number: 222884/04066

Fig. 3C

tatgaatctcttatcattgatgggtttatttatggagattcttagttcctgttcagattgt  
961-----+-----+-----+-----+-----+-----+-----+ 1020  
Y E S L I I D G L F M E I L S S C S D C -

P B  
f a  
l m  
M H  
I I

gatgagatccaattcatggaagatggatcctgggtgcccaatgaaaccaagaaggaggca  
1021-----+-----+-----+-----+-----+-----+-----+ 1080  
D E I Q F M E D G S W C P M K P K K E A -

P  
f  
l  
M  
I

tctgaggtttgcccccgccagggtatgggctggatggcctccagtagagcccagtagccag  
1081-----+-----+-----+-----+-----+-----+-----+ 1140  
S E V C P P P G Y G L D G L Q Y S P V Q -

gggggagatccatcagagaataagaagaaggatcgaagtattgacttgacaatagaaagc  
1141-----+-----+-----+-----+-----+-----+-----+ 1200  
G G D P S E N K K K V E V I D L T I E S -

P  
v  
u  
I  
I

tcatcagatgaggaggatctgccccctaccaagaagcactgttctgtcacctcagctgcc  
1201-----+-----+-----+-----+-----+-----+-----+ 1260  
S S D E E D L P P T K K H C S V T S A A -

atcccgccctacctggaagcaaaggagtcctgacatctggccaccagccatcctcggtg  
1261-----+-----+-----+-----+-----+-----+-----+ 1320  
I P A L P G S K G V L T S G H Q P S S V -

ctaaggagccctgctatgggcacgttgggtggggatttcctgtccagctctcccactacat  
1321-----+-----+-----+-----+-----+-----+-----+ 1380  
L R S P A M G T L G G D F L S S L P L H -

gagtaccacactgccttcccactgggagccgacatccaaggttagatttattttcattt  
1381-----+-----+-----+-----+-----+-----+-----+ 1400  
E Y P P A F P L G A D I Q G L D L F S F -

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2007-05-20

APPROVED	C.G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAN		

Title: PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME

Inventors Name: Brown, et al.  
Attorney Docket Number: 222884/04066

Fig. 3D

cttcagacagagagtcagcactatggccctctgtcatcacctcactagatgaacaggat  
1441-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 1500  
L Q T E S Q H Y G P S V I T S L D E Q D -

gccttggccacttcttccagtagccgagggaccccttctcactttctgggcccactggcc  
1501-----+-----+-----+-----+-----+-----+-----+-----+-----+ 1560  
A L G H F F Q Y R G T P S H F L G P L A -

cccacgctggggagctccactgcagcgccactccggcgccccctcctggccgtgtcagc  
1561-----+-----+-----+-----+-----+-----+-----+-----+-----+ 1620  
P T L G S S H C S A T P A P P P G R V S -

agcattgtggcccctgggggggccttgagggaggggcatggaggacccctgccctcaggt  
1621-----+-----+-----+-----+-----+-----+-----+-----+-----+ 1680  
S I V A P G G A L R E G H G G P L P S G -

ccctctttgactggctgtcggtcagacatcatttccttgactga  
1681-----+-----+-----+-----+-----+-----+-----+-----+-----+ 1725  
P S L T G C R S D I I S L D \* -

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Enzymes that do cut:

Apal	BamHI	BsaWI	BstEII	NarI	PflMI	PstI	PvuII
SauI							

Enzymes that do not cut:

AatII	AgeI	AseI	AvaI	BbrPI	BfrI	BglII	BsaBI
BsmI	BssHII	BstBI	BstXI	ClaI	DraI	DraIII	EagI
EcoRI	HindIII	HpaI	KpnI	MluI	NcoI	NdeI	NheI
NotI	NruI	NsiI	PmlI	PvuI	SacII	SalI	ScaI
SfiI	SmaI	SnaBI	SpeI	SspI	StuI	XbaI	XhoI

APPROVED: C. S. FIG.	
BY	CLASS: SUBCLASS:
DRAFTSMAN:	

Title: PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME

Inventors Name: Brown, et al.

Attorney Docket Number: 222884/04066

Fig. 4

```

1 MKIKELYRRRFPRKTLGPSDSLSSLSPPGTSPVGSPGPLAPIPPTLLAPG 50
  |||||:|.
1 MKIKELYRRRFPRKTLGPSDSLSSLSPPGTSPVGSPSPLASIPPTLLTPG 50

51 TLLGPKREVDMMHPPLPQPVHPDVTMKPLPFYEVYGELIRPTTLLASTSSQR 100
  |||||
51 TLLGPKREVDMMHPPLPQPVHPDVTMKPLPFYEVYGELIRPTTLLASTSSQR 100

101 FEEAHFTFALTPQQVQQILTSREVLPGAKCDYTIQVQLRFCLCETSCPQE 150
  |||||:|
101 FEEAHFTFALTPQQVQQILTSREVLPGAKCDYTIQVQLRFCLCETSCPQE 150

151 DYFPPNLFVKVNGKLCPLPGYLPPTKNGAEPKRPSRPINITPLARLSATV 200
  |||||
151 DYFPPNLFVKVNGKLCPLPGYLPPTKNGAEPKRPSRPINITPLARLSATV 200

201 PNTIVVNWSSSEFGRNYSLSVYLVRQLTAGTLLQKLRAKGIRNPDHSRALI 250
  |||||
201 PNTIVVNWSSSEFGRNYSLSVYLVRQLTAGTLLQKLRAKGIRNPDHSRALI 250

251 KEKLTADPDSEVATTSLRVSLMCPLGKMRLTVPCRALTC AHLQSFDAALY 300
  |||||
251 KEKLTADPDSEVATTSLRVSLMCPLGKMRLTVPCRALTC AHLQSFDAALY 300

301 LQMNEKKPTWTCPVCDKKAPYESLIIDGLFMEILSSCSDCDEIQFMEDGS 350
  |||||:|
301 LQMNEKKPTWTCPVCDKKAPYESLIIDGLFMEILNSCSDCDEIQFMEDGS 350

351 WCPMKPKKEASEVCPPPGYGLDGLQYSPVQGGDPSENKKKVEVIDLTIES 400
  |||||:|.
351 WCPMKPKKEASEVCPPPGYGLDGLQYSPVQEGNQSENKKRVEVIDLTIES 400

401 SSDEEDLPPTKKHCSVTSAAI PALPGSKGVLTS GHQPSSVLRSPAMGTLG 450
  |||||.
401 SSDEEDLPPTKKHCPVTSAAI PALPGSKGALTSGHQPSSVLRSPAMGTLG 450

451 GDFLSSLPLHEYPPAFPLGADIQGLDLFSFLQTESQHYGPSVITSLDEQD 500
  :|||:|
451 SDFLSSLPLHEYPPAFPLGADIQGLDLFSFLQTESQHYSPSVITSLDEQD 500

501 ALGHFFQYRGTPSHFLGPLAPT LGSSHCSATPAPPPGRVSSIVAPGGALR50
  .|||:|
501 TLGHFFQFRGTPPHFLGPLAPT LGSSHR SATPAPAPGRVSSIVAPGSSLR 550

551 EGHGGPLPSGPSLTGCRSDIISLD* 575
  |||||:|
551 EGHGGPLPSGPSLTGCRSDVISLD* 575

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